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HK2 (Hexokinase II) Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP8140a

Specification

HK2 (Hexokinase II) Antibody (N-term) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	P52789
Other Accession	P27881, Q1W674, O08528
Reactivity	**Human**
Predicted	**Mouse, Pig, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**91-121**

HK2 (Hexokinase II) Antibody (N-term) - Additional Information

Gene ID 3099

Other Names
Hexokinase-2, Hexokinase type II, HK II, Muscle form hexokinase, HK2

Target/Specificity
This HK2 (Hexokinase II) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 91-121 amino acids from the N-terminal region of human HK2 (Hexokinase II).

Dilution
WB~~1:1000
IHC-P~~1:50~100
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
HK2 (Hexokinase II) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

HK2 (Hexokinase II) Antibody (N-term) - Protein Information

Name HK2 (HGNC:4923)

Function Catalyzes the phosphorylation of hexose, such as D-glucose and D-fructose, to hexose 6-phosphate (D-glucose 6-phosphate and D- fructose 6-phosphate, respectively) (PubMed:23185017, PubMed:26985301, PubMed:29298880). Mediates the initial step of glycolysis by catalyzing phosphorylation of D-glucose to D-glucose 6-phosphate (PubMed:29298880). Plays a key role in maintaining the integrity of the outer mitochondrial membrane by preventing the release of apoptogenic molecules from the intermembrane space and subsequent apoptosis (PubMed:18350175).

Cellular Location
Mitochondrion outer membrane; Peripheral membrane protein. Cytoplasm, cytosol Note=The mitochondrial-binding peptide (MBP) region promotes association with the mitochondrial outer membrane (PubMed:29298880) The interaction with the mitochondrial outer membrane via the mitochondrial-binding peptide (MBP) region promotes higher stability of the protein (PubMed:29298880). Release from the mitochondrial outer membrane into the cytosol induces permeability transition pore (PTP) opening and apoptosis (PubMed:18350175).

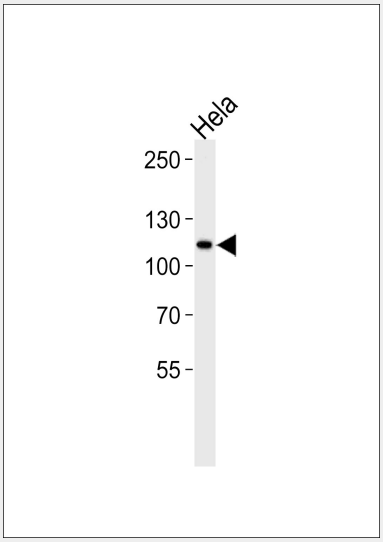
Tissue Location
Predominant hexokinase isozyme expressed in insulin-responsive tissues such as skeletal muscle

HK2 (Hexokinase II) Antibody (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

HK2 (Hexokinase II) Antibody (N-term) - Images



HK2 Antibody (E106) (Cat. #AP8140a) western blot analysis in Hela cell line lysates (35ug/lane).This demonstrates the HK2 antibody detected the HK2 protein (arrow).

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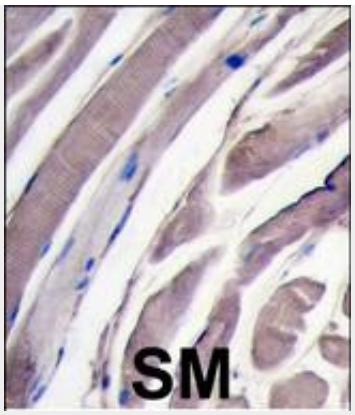

Formalin-fixed and paraffin-embedded human skeletal muscle tissue reacted with HK2 antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

HK2 (Hexokinase II) Antibody (N-term) - Background

In vertebrates there are four major glucose-phosphorylating isoenzymes, designated hexokinase I, II, III, and IV. Hexokinase is an allosteric enzyme inhibited by its product GLC-6-P. Hexokinase activity is involved in the first step in several metabolic pathways. HK3 is bound to the outer mitochondrial membrane. Its hydrophobic N-terminal sequence may be involved in membrane bindng. It is the predominant hexokinase isozyme expressed in insuline-responsive tissues such as skeletal muscle. The N- and C-terminal halves of this hexokinase show extensive sequence similarity to each other. The catalytic activity is associated with the C-terminus while regulatory function is associated wiht the N-terminus. Although found in NIDDM patients, genetic variations of HK2 do not contribute to the disease.

HK2 (Hexokinase II) Antibody (N-term) - References

Lehto, M., et al., Diabetologia 38(12):1466-1474 (1995).
Vidal-Puig, A., et al., Diabetes 44(3):340-346 (1995).
Laakso, M., et al., Diabetes 44(3):330-334 (1995).
Echwald, S.M., et al., Diabetes 44(3):347-353 (1995).
Shinohara, Y., et al., Cancer Lett. 82(1):27-32 (1994).

HK2 (Hexokinase II) Antibody (N-term) - Citations

- Circ_0046599 Promotes the Development of Hepatocellular Carcinoma by Regulating the miR-1258/RPN2 Network
- Analyses of resected human brain metastases of breast cancer reveal the association between up-regulation of hexokinase 2 and poor prognosis.